

Agilent Ref: 10021235-1
United States Application Serial No. 10/670,551

AMENDMENTS TO THE CLAIMS

Please enter the following amendments.

1. **(Currently Amended)** A structure for the construction of one of a microscale and nanoscale device, comprising
 a rigid frame supporting a diaphragm comprising a first material, the diaphragm having an opening therethrough,
 a region of a second material disposed in the opening and supported by the diaphragm,
 wherein the diaphragm is in tension ~~first material and the second material are different.~~
2. **(Original)** A structure as recited in claim 1, wherein the diaphragm comprises a layer of a silicon nitride.
3. **(Original)** A structure as recited in claim 1, wherein the second material comprises one of polyimides, photoresists, Parylene®, organic molecules, inorganic molecules, metal, and insulators.
4. **(Original)** A structure as recited in claim 1, wherein the second material comprises polyimide.
5. **(Original)** A structure as recited in claim 1, wherein the nanoscale device is nanopore.
6. **(Previously Presented)** A structure as recited in claim 2, wherein the silicon nitride layer is from 100 nm to 300 nm in thickness.
7. **(Previously Presented)** A structure as recited in claim 2, wherein the silicon nitride layer is about 200 nm thick.

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8. **(Original)** A structure as recited in claim 1, wherein the width of the diaphragm is about 40 micrometers.
9. **(Canceled)**
10. **(Original)** A structure as recited in claim 1, wherein the opening has a diameter of about 5 micrometers.
11. – 20. **(Canceled)**
21. **(Previously Presented)** A structure for the construction of one of a microscale and nanoscale device, comprising
a rigid frame supporting a diaphragm comprising a first material, the diaphragm having an opening therethrough,
a region of a second material disposed in the opening and supported by the diaphragm,
wherein the second material comprises polyimide.
22. **(Previously Presented)** A structure as recited in claim 21, wherein the diaphragm comprises a layer of silicon nitride.
23. **(Previously Presented)** A structure as recited in claim 21, wherein the nanoscale device is nanopore.
24. **(Previously Presented)** A structure as recited in claim 22, wherein the silicon nitride layer is from 100 nm to 300 nm in thickness.
25. **(Previously Presented)** A structure as recited in claim 22, wherein the silicon nitride layer is about 200 nm thick.
26. **(Previously Presented)** A structure for the construction of one of a microscale and nanoscale device, comprising

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a rigid frame supporting a diaphragm comprising a first material, the diaphragm having an opening therethrough,
a region of a second material disposed in the opening and supported by the diaphragm,
wherein the opening has a diameter of about 5 micrometers.

27. **(Previously Presented)** A structure as recited in claim 26, wherein the diaphragm comprises a layer of a silicon nitride.

28. **(Previously Presented)** A structure as recited in claim 26, wherein the second material comprises one of polyimides, photoresists, Parylene®, organic molecules, inorganic molecules, metal, and insulators.

29. **(Previously Presented)** A structure as recited in claim 26, wherein the second material comprises polyimide.

30. **(Previously Presented)** A structure as recited in claim 26, wherein the nanoscale device is a nanopore.

31. **(New)** A structure for the construction of one of a microscale and nanoscale device, comprising

a rigid frame supporting a diaphragm comprising a first material, the diaphragm having an opening therethrough,
a region of a second material disposed in the opening and supported by the diaphragm,
wherein said region of a second material comprises a single nanopore.